## ISSUE SLIP STAPLE AREA (for additional cross references)

| POSITION                  | INITIALS | ID NO. | DATE |
|---------------------------|----------|--------|------|
| 2                         | 1        |        |      |
| FEE DETERMINATION         |          |        |      |
| O.I.P.E. CLASSIFIER       | `        |        |      |
| FORMALITY REVIEW          |          |        |      |
| RESPONSE FORMALITY REVIEW |          |        |      |
|                           |          |        |      |

## **INDEX OF CLAIMS**

| • | Rejected                   | N | Non-electe   |
|---|----------------------------|---|--------------|
| = | Allowed                    | 1 | Interference |
| _ | (Through numeral) Canceled | Α | Appeal       |
| ÷ | Restricted                 | 0 | Objected     |

| ·ſ | Cla            | im                | Date     |  |          |  |              |  |  |  |          |          |     | С            | aim                                       | Г  |                |          |          | Da       | te       |          |          |          | _        | 7             | C            | aim      | _             |          | -         |          | Da       | te       | _        |          | <u> </u>               | _        |
|----|----------------|-------------------|----------|--|----------|--|--------------|--|--|--|----------|----------|-----|--------------|---|--|----------------|----------|----------|----------|----------|----------|----------|----------|----------|---------------|--------------|----------|---------------|----------|-----------|----------|----------|----------|----------|----------|------------------------|----------|
| I  | _              |                   | Г        |  |          |  |              |  |  |  | 1        | Ť        | 1   | T            | Г   |  | Τ              | Ī        | Ť        |          | Π        | Π        | Г        | 1        | ۳        | $\overline{}$ |              | 1        | Г             | П        |           | Ī        | Ε.       | Γ        |          | $\dashv$ |                        |          |
|    | اچ             | Original          |          | 1  |          |  |              |  | ı  | 1  |          |          | 1   | -            | S. C. |  |                |          | 1        |          |          |          |          |          |          |               | -            | Original | 13            | N        |           | 1        | ,        |          |          |          |                        |          |
| 1  | Final          | Ę,                |          | ŀ  |          |  |              |  | l  | ļ  |          |          |     | Final        | Ιă  | Ί  | l              | 1        |          | 1        | i        | ł        |          | ĺ        | l        | İ             | Final        | Ę        |               |          |           | l        | 1        | ,        | -        | l        | 1                      |          |
| ŀ  | ᅱ              | Ĭ                 |          | t  | t        | t  | +            | t  | t  | t  | ٢        | 1        | 1   | F            | Ă   |  | ├-             | ╆        | -        | ┢        | ╁        | H        | $\vdash$ | $\vdash$ | H        | 1             | F            | 101      |               | -        | ┢         | ╁        | -        | ┝        | $\vdash$ | -        | Н                      | $\dashv$ |
| ł  | $\dashv$       | 7                 | ←        | ╁  | ╁        | ╁  | ┼-           | $\vdash$   | ╁╌   | ╁╌   | ╁        | +        | 1   | $\vdash$     | 1   | +  | Н              | Н        | $\vdash$ | $\vdash$ | ⊢        | -        | -        | -        | $\vdash$ | ł             | $\vdash$     | 102      | Y             | $\vdash$ | ┼         | ŀ        | ⊢        | ┝        | ┝        | ├-       | $\vdash \vdash$        |          |
| ł  | $\dashv$       | 3                 | ⊢        | $\vdash$   | ⊢        | ⊢  | $\vdash$     | ├  | ┼  |  | ╁        | ┢        | 1   | $\vdash$     | 걟   | +  | ⊢              | $\vdash$ | ┝        | ├-       |          | -        | ⊢        |          | ⊢        | 1             | $\vdash$     | 103      |               | ⊢        | ├         | ⊢        | ┢        | -        | ├-       | <u> </u> | Н                      | $\dashv$ |
| ŀ  | -              | ľ                 | _        | ₩  | ╀        | ╄  | ┾            | <u> </u>   | ⊢  | ļ  | ╄        | <b>⊢</b> | 4   | -            | 3   | Ή.   | <del>  _</del> | ┞-       | ļ        | <u> </u> | _        | _        |          | _        | _        | 4             | <u>_</u>     |          |               | _        | <u> </u>  | ┖        |          | L_       | _        | Ш        | Ц                      | _        |
| ŀ  | 4              | 4 15 6            | <u> </u> | ↓_   | ╀        | ╂  | ⊢            | ⊢  | -  | ⊢  | ├-       | ⊢        | 4   | $\vdash$     | 13  | 4_   | . :            | ┞-       | ┢        | L        | ┡        | <u> </u> |          | $\vdash$ | ╄-       | ł             | ┝            | 104      |               | <u> </u> | ╙         | ┖        | _        | <u> </u> |          | Ш        | Ц                      | _        |
| 1  | _              | ₽                 | <u> </u> | ļ.,  | ┞-       | 1  | _            |  | 1  | ┡  | ╀        | <u> </u> | 1   | $\vdash$     | 13:                                       | 1_   | L              | ļ.       | <u> </u> |          | L        | _        |          | L        |          | 1             | $\perp$      | 105      | L,            | L        | L_        | <u> </u> | 匚        |          |          | L        | Ш                      | _        |
|    |                | 6                 | _        |  | _        | <u> </u>   | _            | ┖  | ┖  | L  | <u> </u> | ┖        | 1   | $\perp$      |   |  | L              | L        | L        |          |          |          |          | _        | <u> </u> |               | L            | 106      | V             | _        | L         | L        |          |          |          |          | $\sqcup$               |          |
| `[ |                | 7                 |          | <u> </u>   | L        | L  |              |  | <u> </u>   | ┖  | L        | L        |     | $\perp$      | 57  |  | L              | L        | _        | L        | L        |          | Ш        | L_       | L        |               | ┖            | 107      | $\mathbb{C}$  |          | <u> </u>  | L        |          |          |          |          |                        |          |
| L  |                | В                 |          |  | L        |  |              |  |  | _  |          |          |     | L            | 58  |  | <u></u>        | L        | <u>L</u> |          | Ĺ        | L        |          |          |          | ] `           |              | 108      |               |          |           | L        |          |          |          |          |                        |          |
| ŀ  |                | 10                |          |  |          |  |              |  |  |  |          |          | J   | L            | 59  |  |                |          |          | L.       |          |          |          |          |          |               |              | 109      |               |          |           |          |          |          |          |          | П                      | $\neg$   |
| ſ  |                | 10                |          |  |          |  |              |  |  |  |          |          |     |              | 60  |  |                |          | I -      |          |          |          |          |          |          | 1             | Г            | 110      |               |          |           | Γ        |          |          |          |          |                        | ヿ        |
| ľ  | П              | 1                 | Г        |  | Г        | Г  | П            | П  | Г  | Г  | Г        |          | 1   | Г            | 61  | Г  | ·              | Г        |          |          |          |          |          |          |          | ĺ             | Г            | 111      |               |          | Г         |          |          |          |          |          | П                      | ヿ        |
| t  |                | <b>(2)</b>        |          | Ħ  | T        |  |              |  |  |  | T        |          | 1   |              | 62  | T  |                | Г        |          |          |          |          |          |          |          | 1             | 厂            | 112      |               |          |           | Т        |          | _        |          |          | П                      | ┨        |
| ŀ  | 3              | (2)<br>18         |          | 1  | 1        | $\vdash$   | Τ.           | <del> </del>                                     | T  |  |          |          | 1 . |              | 63  | T  | ١.             |          | П        |          |          |          | М        | П        | Г        | 1             | <b>—</b>     | 113      | Н             |          | _         | 1        | Н        | $\vdash$ | $\Box$   |          | $\vdash$               | 一        |
| ŀ. |                | 14                | 1        | <del>                                     </del> |          |  | <del> </del> |  | <del>                                     </del> | <del>                                     </del> |          | ١.       | 1   | H            | 6   | t  | -              |          | П        | Н        | Н        |          | $\vdash$ | -        | _        | 1             | -            | 114      | $\vdash$      |          | $\vdash$  |          | H        | H        | H        | Н        | -                      | $\dashv$ |
| ŀ  | 7              | 15                | ,        | Η.   |          | <del>                                     </del> | 1            | <del>                                     </del> |  | -  | H        | H        | 1   | -            | 6<br>66                                   |  | H              | $\vdash$ | H        | H        | H        | -        | $\vdash$ |          | -        | 1             | -            | 115      | $\vdash$      | -        | H         | -        | H        | H        |          | Н        | $\vdash$               | $\dashv$ |
| ŀ  |                | 15<br>16<br>17    |          | ļ.,  |          |  | -            | ,  | H  | ├  | 1        | Ť        | 1   | H            | S.  | -  | -              | $\vdash$ | $\vdash$ | е        |          | -        | $\vdash$ |          | $\vdash$ |               | $\vdash$     | 116      |               |          | $\vdash$  | -        | Н        | $\vdash$ | -        |          | $\left  \cdot \right $ | -1       |
| ۱  | * 7            |                   | 138      | 1  | - 1      | . 1  | 1,5          | 1  | 7,   | 1.5  |          | 1.       | 1   | H            | 67  | <del>                                     </del> |                | 1.       | Н        | _        | -        |          | -        | -        | H        | 1             | ⊢            | 117      |               | _        | 4         | ⊢        | •        | Н        | -        |          | H                      | ᅱ        |
| F  |                | À                 | ()<br>   |  |          |  |              | _  | _  | _  |          |          | , - | H            | 쏬   | -  | - 1            |          | H        | •        | -        | _        |          | -        | -        |               | <del> </del> |          | $\overline{}$ | 4        | -         | ŀ        | 4. *     |          | 7.E2     | +        |                        | 4        |
| ľ  |                | 19 20             | ¥        | 7)   |          | ├  | į            |  | 74   | .,   | Ĩ.       |          | Ĭ.  | <u> </u>     | 68  | L  |                | Ľ        | ξ.       |          |          |          | _        |          | <u> </u> |               | ⊢            | 118      |               |          | _         | -        | ·        | jr.      | 1.       |          | $\dashv$               | 긕        |
|    |                | 19                | -        | ::   |          | -  | 1            |  |  | L  | L.       |          | ٠   | <u></u>      | 69  | <u> </u>   |                |          |          | *.       | ۸.       |          |          | _        | Щ        |               | L            | 119      |               | _        |           | _        |          | _        | _        | _        |                        | _        |
|    | ?              | 2Q                |          | 1  | -        |  |              |  |  |  |          | · ·      |     | L            | 69<br>70                                  |  | -              |          |          |          |          |          |          |          |          |               |              | 120      |               |          |           |          | L. I     |          |          | _        | Ιl                     |          |
|    | • ]            | 21                | -        |  |          | -  |              |  |  |  |          |          |     |              | 71  |  |                |          |          |          |          |          |          |          |          |               |              | 121      | $\neg$        |          |           | Г        |          |          |          |          |                        | П        |
| F  |                | 22                |          |  |          |  |              |  |  |  |          |          | 1   | Г            | 72  |  | Ą              |          |          |          |          |          | $\neg$   |          |          | 1             | _            | 122      |               |          |           |          |          |          |          |          | П                      | $\neg$   |
| r  | П              | 23                |          |  |          |  | П            |  | Г  |  |          |          |     | Г            | 73  |  | -              |          |          |          |          |          | $\neg$   |          |          |               |              | 123      | ヿ             |          |           | _        |          |          |          |          | $\sqcap$               |          |
| t  | 3              | 22 23 26 27 29 31 | 7        |  | _        | ┪  |              | Н  | Т  |  | П        |          |     | Г            | 74<br><b>(</b> 5                          | Г  | :              |          |          |          |          |          | _        | _        |          | ŀ             | $\vdash$     | 124      | 寸             |          |           |          |          | $\neg$   |          | $\neg$   | $\sqcap$               | ╛        |
| ŀ  | ÷              | Ã                 |          |  |          | $\vdash$   | -            | -  |  | Н  | Н        |          | 1   | <u> </u>     | 65  | <b>-</b>   | _              | Н        |          |          |          |          | $\dashv$ | -        |          |               | $\vdash$     | 125      | ┪             |          |           | Н        |          | $\dashv$ |          | -        | $\dashv$               | ┥        |
| t  | Ť              | *                 |          |  |          | ┝  | -            | $\vdash$   |  | -  | Н        |          | 1   | $\vdash$     | 76  |  |                |          | $\dashv$ |          | $\neg$   |          | $\dashv$ |          | _        |               | ⊢            | 126      | ┪             |          |           | H        |          | $\dashv$ | -        | -        | +                      | $\dashv$ |
| ł  | ┪              | <del>5</del>      |          | -  |          | ⊢  |              | -  | -  | _  | -        | -        |     | H            | 77,                                       | -  |                | -        |          |          | -        | $\dashv$ | $\dashv$ | $\dashv$ |          |               | ├─           | 127      | -             | _        | _         |          | $\dashv$ |          | -        | $\dashv$ | $\vdash$               | $\dashv$ |
| ŀ  | -              | à                 |          | -  |          | ├  | H            |  | H  | -  | Н        |          |     | _            | 78  |  | •              |          | $\dashv$ |          |          | -        | $\dashv$ | -        |          |               | ⊢            | 128      | -             |          |           |          | -        | $\dashv$ | -        |          | $\vdash$               | $\dashv$ |
| ŀ  | -1             | 2                 | - 1      | <del> </del>                                     | <u> </u> | <del> </del>                                     | Н            |  | $\vdash$   | _  | Н        | _        |     | ⊢            | 12  | H  | -              |          | $\dashv$ | -        |          |          |          |          |          |               | ⊢            | 129      | _             | _        |           | Ш        | _        | $\dashv$ |          |          | $\vdash$               | $\dashv$ |
| ŀ  | 4              | 겝                 |          | <u> </u>   |          | <u> </u>   |              |  | L  |  | Ш        |          |     | <u> </u>     | 79  |  |                |          | Н        | _        |          |          |          | _        |          |               | <u> </u>     |          | _             |          |           |          |          | _        | _        | _        | $\vdash$               | 4        |
| ŀ  | 4              | 30                |          | _  |          | <u> </u>   |              |  | Щ  |  | Щ        |          |     |              | 80<br>81                                  | $\perp$  |                | Ш        |          | _        | _        | _        | _        | _        |          |               | ┕            | 130      |               |          |           | <u> </u> |          | _        | _        | _        | $\dashv$               | 4        |
| L  | 4              | 31                |          |  | _        | L  |              |  | Ш  |  | Ш        |          |     | <u></u>      | 81  |  |                |          | Ц        |          | _        |          | _        |          |          |               | ᆫ            | 131      |               |          |           |          |          | _        |          | _        | Ц                      | _        |
| L  |                | 32                |          | _  |          | $oxed{oxed}$                                     | Ш            | L.,  | L  |  | Ш        |          |     |              | 82  |  |                |          |          |          |          |          |          |          | لـــا    |               | $oxed{oxed}$ | 132      |               |          |           |          |          |          |          |          | Ш                      | ]        |
| L  |                | 33                |          | L  | L        | L  | Ш            |  | لـــا  |  |          |          |     | Ĺ            | 83  |  |                |          |          | ]        | _]       | I        | [        |          |          |               | Ĺ            | 133      |               |          |           |          |          | I        | ]        | ]        |                        |          |
| Ĺ  |                | 34                |          | L  |          | L  |              |  |  |  |          |          |     | $\Box$       | 84  |  |                |          |          |          |          |          |          |          |          |               |              | 134      |               |          |           |          |          |          |          |          | $\Box T$               | $\Box$   |
|    |                | 35                |          | L  |          |  |              |  |  |  |          |          |     |              | 85  |  |                |          |          |          | $\neg$   |          | $\neg$   |          |          |               |              | 135      |               | П        |           |          |          |          |          |          | П                      |          |
| Γ  | T              | 36                |          |  |          |  |              |  |  |  |          |          |     | Г            | 86  |  |                |          |          |          |          |          |          |          |          |               |              | 136      | $\neg$        | _        |           |          | $\neg$   |          |          |          | $\sqcap$               | $\neg$   |
| Γ  | 7              | 37                |          |  |          |  |              |  |  |  | П        |          |     | T            | 3   |  |                |          |          |          | $\neg$   |          |          |          |          |               |              | 137      | 一             | ╗        |           |          |          |          |          |          | $\sqcap$               | ヿ        |
| T  | 1              | 38                |          |  |          |  | П            |  | _  |  | $\vdash$ |          |     | $\vdash$     | 86<br>88                                  | $\Box$   |                | -        | $\vdash$ |          | $\neg$   | $\dashv$ | _        |          |          |               | <u> </u>     | 138      | 一             | -        |           | -        |          |          |          |          | 一十                     | $\dashv$ |
| r  |                | 39                | $\neg$   | $\vdash$   | _        | Н  | H            | Н  | -  | -  | Н        |          |     | Н            | 89  | Н  |                | $\vdash$ | $\vdash$ | $\dashv$ | $\dashv$ | $\dashv$ | _        | $\dashv$ | H        |               | H            | 139      | ┪             | -        | $\vdash$  | _        | $\dashv$ | $\dashv$ | $\dashv$ | $\dashv$ | $\dashv$               | 一        |
| r  |                | 40                | $\neg$   | $\vdash$   | -        | -  | H            | H  | Η-   |  | H        | -        |     | <del> </del> | 90  | $\vdash$   |                | H        | $\vdash$ | -        |          | -        | -1       | -        | Н        |               | $\vdash$     | 140      | $\dashv$      | $\dashv$ | $\vdash$  | Η:       | $\dashv$ | $\dashv$ | $\dashv$ |          | $\dashv$               | $\dashv$ |
| H  |                |                   | Н        | -  | -        | $\vdash$   | $\vdash$     | $\vdash$   | $\vdash$   | -  | $\vdash$ | _        |     | -            | S A                                       | -  |                | $\vdash$ | $\vdash$ | -        |          |          |          |          | щ        |               | <u> </u>     |          | $\dashv$      | -        | $\dashv$  | Н        | -        | -        | _        |          | $\dashv$               | $\dashv$ |
| H  | 4              | 4 43              | Щ        | <u> </u>   |          | Ш  | Н            | Ш  | Ь.   |  | Ш        | _        |     | $\vdash$     | Ψ   | Н  |                | Ш        | $\Box$   | _        |          |          | _        | _        | Ш        |               | $\vdash$     | 141      | _             |          | Щ         | Щ        |          | _        |          | _        | $\dashv$               | $\dashv$ |
| L  | _}             | 벌                 | $\Box$   | <u> </u>   | <u> </u> | <b> </b>   | Ш            | Ш  | Ш  |  | Щ        |          |     | <u> </u>     | 92  | <u> </u>   |                | Ш        |          | _        | _        | ļ        |          |          | Ш        |               | <u> </u>     | 142      | _             | _        | Ш         | Ш        |          | _        | _        |          | 4                      | 凵        |
| L  | 4              | 43                |          | <u> </u>   | _        |  |              |  |  |  |          |          | Į   | L            | 92<br>98<br>9                             | Ш  |                | Ш        |          |          |          |          |          |          |          |               | <u> </u>     | 143      |               |          |           | Ш        |          |          |          |          | Ц                      | _        |
| L  |                | 44                |          |  |          |  |              |  | L  |  | L        |          |     | L            | 9   |  |                |          |          |          | l        |          |          |          |          |               | L            | 144      |               |          |           |          |          |          |          |          |                        | $\Box$   |
| Ĺ  | $ \mathbb{J} $ | 45                |          |  |          |  |              |  |  |  |          |          | ĺ   | $L^{-}$      | 95  |  |                |          |          |          |          |          |          |          |          |               |              | 145      |               |          |           |          |          |          |          |          | $\Box$                 |          |
| Γ  | 1              | 46                |          |  |          |  |              |  |  |  |          |          | İ   | Γ.           | 96  |  |                |          |          |          |          | 一        | 寸        | 一        |          |               |              | 146      | ヿ             | $\neg$   |           |          |          | $\neg$   |          |          | T                      | ヿ        |
| Γ  | _              | 47                | П        |  |          | П  | П            | П  |  | П  | П        |          | ĺ   |              | 0   |  |                |          |          | $\neg$   |          |          | 寸        |          | П        |               |              | 147      | 寸             | $\dashv$ |           | Н        | $\neg$   | ᅥ        | $\neg$   |          | $\sqcap$               | ヿ        |
| r  |                | 48                | $\dashv$ |  | $\vdash$ | Н  | Н            | $\vdash$   | $\vdash$   |  | Н        | _        |     | 一            | 98  | 0  | -              | $\vdash$ | -        | 一        | -        | $\dashv$ | $\dashv$ | $\dashv$ | $\vdash$ | i             | $\vdash$     | 148      | $\dashv$      | $\dashv$ | -         | H        | $\dashv$ | -        | $\neg$   | -        | $\dashv$               | ヿ        |
| r  |                | 49                |          | Н  | $\vdash$ |  | Н            | Н  | Н  | _  | Н        | -        |     | $\vdash$     | 99  | 0  |                | Н        | $\dashv$ | $\dashv$ | -        | $\dashv$ | -        | -        | $\dashv$ |               | _            | 149      | -1            | $\dashv$ | $\exists$ | Н        | -1       | -        | $\dashv$ | -        | $\dashv$               | ヿ        |
| H  | +              | 50                | $\dashv$ | $\vdash$   | $\vdash$ | Н  | Н            | $\dashv$   | Н  | -  | H        |          |     | $\vdash$     | 100                                       |  | _              | Н        | $\dashv$ | ┥        | $\dashv$ | $\dashv$ | $\dashv$ | -        | $\dashv$ |               |              | 150      | -             | $\dashv$ | $\dashv$  | $\vdash$ | -1       | $\dashv$ | -        | -        | _                      | $\dashv$ |
| L  |                |                   |          |  |          |  |              |  |  |  |          |          | 1   | _            |   | _  |                |          |          |          |          |          |          | _        |          |               |              |          |               |          |           | لــا     | 1        |          |          |          | _                      |          |

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